

Appl. No. 09/976,499

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1 to 16 (cancelled)

Claim 17 (currently amended): A multi-service segmentation and reassembly (MS-SAR) integrated circuit comprising:

a plurality of input ports; and

means capable of processing a flow received from a switch fabric in accordance with a first egress application type or in accordance with a second egress application type, an indication of an application type being present in the flow as the flow is received onto the MS-SAR, the MS-SAR locating the indication and if the indication indicates the first egress application type then the MS-SAR processes the flow in accordance with the first egress application type, but if the indication indicates the second egress application type then the MS-SAR processes the flow in accordance with the second egress application type;

wherein the flow is received from one of the plurality of input ports, each of the plurality of input ports having a port identification number (port ID), the means having, for each of the plurality of input ports, access to locating information on where in a flow received on that input port the indication of application type would be located, the means using the port ID of a flow to access the locating information, the means using the locating information to locate in the flow the indication of application type.

Claim 18 (original): The MS-SAR of Claim 17, wherein the flow is received on the MS-SAR in the form of a switch cell, the switch cell including a switch header, the indication of an application type being a plurality of bits in the switch header.

Claims 19 to 44 (cancelled)

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Claim 45 (currently amended): A switching device, comprising:

an ingress device that performs a lookup operation on a flow, determines a selected egress application type associated with the flow, and embeds in the flow an indication of the selected egress application type, the selected egress application type being one of a plurality of egress application types;

an egress device capable of performing egress processing in accordance with any one of the plurality of egress application types, the egress device receiving the flow, locating the embedded indication in the flow, and using the embedded indication to determine the selected egress application type, the egress device then egress processing the flow in accordance with the selected egress application type; and

a switch fabric through which the flow passes from the ingress device to the egress device,

wherein the egress device receives the flow on one of a plurality of logical input ports, the logical input port upon which the flow is received having a port identification number (PID), the egress device using the PID to locate the embedded indication in the flow.

Claim 46 (previously presented): The switching device of Claim 45, wherein the ingress device is a first integrated circuit and wherein the egress device is a second integrated circuit, the first and second integrated circuits being substantially identical.

Claim 47 (previously presented): The switching device of Claim 45, wherein the plurality of egress application types comprises: a first egress application type that involves receiving switch cells and outputting cells, a second egress application type that involves receiving switch cells and outputting packets, a third egress application type that involves receiving switch packets and outputting cells, and a fourth egress application type that involves receiving switch packets and outputting packets.

Claim 48 (currently amended): The switching device of Claim 45, wherein the flow comprises a switch cell, wherein ~~the egress device locates the embedded indication by reading~~ comprises a predetermined part of the switch cell.

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Claim 49 (currently amended): The switching device of Claim 45, wherein the flow comprises a switch packet, wherein ~~the egress device locates~~ the embedded indication ~~by reading~~ comprises a predetermined part of the switch packet.

Claim 50 (cancelled)

Claim 51 (currently amended): The switching device of Claim 45, wherein ~~the egress device has a plurality of logical input ports~~, the egress device ~~storing~~ stores for each logical input port information on how to locate an embedded indication in a flow received on said each logical input port.

Claim 52 (previously presented): The switching device of Claim 51, wherein there is a switch header in the flow received onto the egress device, the switch header having a length, the information on how to locate the embedded indication being an indication of the length of the switch header.

Claim 53 (currently amended): An integrated circuit, comprising:
a reassembly engine that can process a flow in accordance with any one of a plurality of egress application types; and
means for locating in the flow and extracting from the flow an indication of a selected egress application type, the flow being received onto the integrated circuit, the indication determining which one of the plurality of egress application types will be carried out on the flow by the reassembly engine,
wherein the flow is received onto a logical input port of the integrated circuit, the logical input port having a port identification number, the means using the port identification number to locate the selected egress application type.

Claim 54 (cancelled)

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Claim 55 (previously presented): A method, comprising:

embedding an indication of a first egress application type into a first flow and embedding an indication of a second egress application type into a second flow;

receiving the first flow onto a first logical input port of an egress multi-service segmentation and reassembly device (MS-SAR) and receiving the second flow onto a second logical input port of the egress MS-SAR, a first port identification number (PID) being associated with the first logical input port, a second PID being associated with the second logical input port;

the egress MS-SAR using the first PID to determine where in the first flow the indication of the first egress application type is located, the egress MS-SAR locating the indication of the first egress application type and processing the first flow in accordance with the first egress application type; and

the egress MS-SAR using the second PID to determine where in the second flow the indication of the second egress application type is located, the egress MS-SAR locating the indication of the second egress application type and processing the second flow in accordance with the second egress application type.

Claim 56 (previously presented): The method of Claim 55, wherein first location information is stored in association with the first PID, and wherein second location information is stored in association with the second PID, the egress MS-SAR using the first PID to retrieve the first location information, the first location information indicating where in the first flow the indication of the first egress application type is located, the egress MS-SAR using the second PID to retrieve the second location information, the second location information indicating where in the second flow the indication of the second egress application type is located.